

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (canceled).

2. (canceled).

3. (canceled).

4. (canceled).

5. (canceled).

6. (canceled).

7. (canceled).

8. (canceled).

9. (canceled).

10. (canceled).

11. (canceled).

12. (canceled).

13. (canceled).

14. (canceled).

15. (canceled).

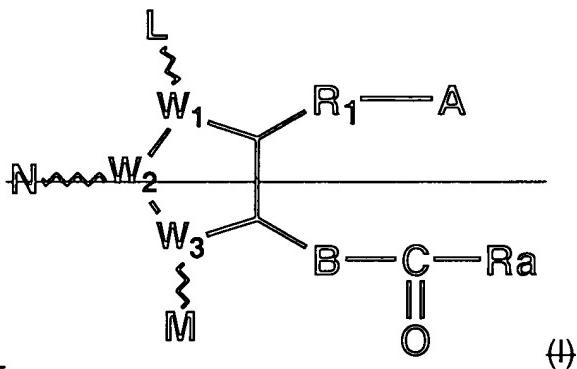
16. (canceled).

17. (canceled).

18. (canceled).

19. (canceled).

20. (currently amended): A method for inhibiting apoptosis induced in the eyes of ~~in~~ a subject ~~having a disease or condition associated with apoptosis~~, which comprises administering an effective amount of a 15-keto-prostaglandin compound represented by the following formula (II):



wherein ~~W₁, W₂ and W₃ are carbon or oxygen atoms;~~

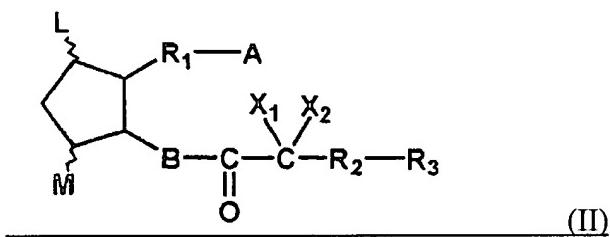
~~L, M and N are hydrogen, hydroxy, halogen, lower alkyl, lower alkoxy, hydroxy(lower)alkyl or oxo, wherein at least one of L and M is a group other than hydrogen, and the five membered ring may have one or more double bond(s);~~

~~A is -CH₂OH, COCH₂OH, COOH or its functional derivative;~~

~~B is -CH₂-CH₂, -CH=CH or -C≡C;~~

~~R₁ is a divalent saturated or unsaturated lower medium aliphatic hydrocarbon residue, which is unsubstituted or substituted by halogen, alkyl, hydroxy, oxo, aryl or heterocyclic group; and~~

~~R_a is a saturated or unsaturated lower medium aliphatic hydrocarbon residue, which is unsubstituted or substituted by halogen, oxo, hydroxy, lower alkyl, lower alkoxy, lower alkanoyloxy, cyclo(lower)alkyl, cyclo(lower)alkyloxy, aryl, aryloxy, heterocyclic group or heterocyclic oxy group; cyclo(lower)alkyl; cyclo(lower)alkyloxy; aryl; aryloxy; heterocyclic group; or heterocyclic oxy group by the following formula (II):~~



wherein L and M are hydrogen, hydroxy, halogen, lower alkyl, lower alkoxy, hydroxy(lower)alkyl or oxo, wherein at least one of L and M is a group other than hydrogen, and the five-membered ring may have one or more double bond;

A is -CH₂OH, -COCH₂OH, -COOH or its functional derivative;

B is -CH₂-CH₂-, -CH=CH- or -C≡C-;

X₁ and X₂ are hydrogen, lower alkyl or halogen;

R₁ is a divalent saturated or unsaturated lower-medium aliphatic hydrocarbon residue, which is unsubstituted or substituted by halogen, alkyl, hydroxy, oxo, aryl or heterocyclic group;

R₂ is a single bond or lower alkylene; and

R₃ is lower alkyl, lower alkoxy, cyclo(lower)alkyl, cyclo(lower)alkyloxy, aryl, aryloxy, heterocyclic group or heterocyclic-oxy group to the subject.

21. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 13,14-dihydro-15-keto-prostaglandin compound.

22. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 15-keto-16-mono or dihalogen-prostaglandin compound.

23. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 13,14-dihydro-15-keto-16-mono or di-halogen-prostaglandin compound.

24. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 15-keto-16-mono or di-fluoro-prostaglandin compound.

25. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 13,14-dihydro-15-keto-16-mono or di-fluoro-prostaglandin compound.

26. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 15-keto-20-lower alkyl-prostaglandin compound.

27. (currently amended): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 15-keto-20-ethyl-prostaglandin compound.

28. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 2-decarboxy-2-(2-carboxy lower alkyl)-15-keto-prostaglandin compound.

29. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 2-decarboxy-2-(2-carboxyethyl)-15-keto-prostaglandin compound.

30. (previously presented): The method of claim 20, wherein the 15-keto-prostaglandin compound is a 2-decarboxy-2-(2-carboxyethyl)-13,14-dihydro-15-keto-16-mono or di-fluoro prostaglandin compound.

31. (previously presented): The method of claim 20, wherein the 15-keto prostaglandin compound is a 2-decarboxy-2-(2-carboxyethyl)-13,14-dihydro-15-keto-16-mono or di-fluoro prostaglandin compound.

32. (previously presented): The method of claim 20, wherein the 15-keto prostaglandin compound is a 2-decarboxy-2-(2-carboxyethyl)-13,14-dihydro-15-keto-16,16-di-fluoro-20-ethyl-prostaglandin compound.

33. (previously presented): The method of claim 20, wherein the 15-keto prostaglandin compound is a 15-keto-prostaglandin E compound.

34. (previously presented): The method of claim 20, wherein the 15-keto prostaglandin compound is a 2-decarboxy-2-(2-carboxyethyl)-13,14-dihydro-15-keto-16,16-di-fluoro-20-ethyl-prostaglandin E₁ isopropyl ester.

35. (currently amended): The method of claim 20, wherein ~~the disease or condition associated with apoptosis is~~ subject has an eye disorder associated with apoptosis.

36. (previously presented): The method of claim 35, wherein the eye disorder associated with apoptosis is an eye disorder caused by light.

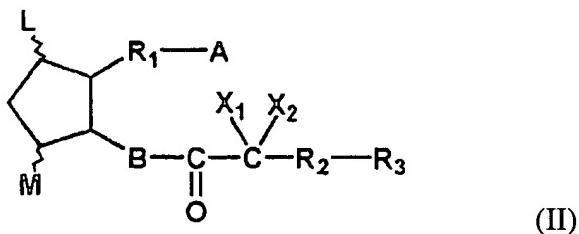
37. (previously presented): The method of claim 36, wherein the eye disorder caused by light is photoretinitis.

38. (previously presented): The method of claim 20, which comprises administering ophthalmically a composition comprising a 15-keto-prostaglandin compound formulated in a dosage form suitable for ophthalmic administration.

39. (previously presented): The method of claim 38, wherein said composition is formulated as eye drops.

40. (new): The method of claim 20, wherein apoptosis is induced by light.

41. (new): A method for treating photoretinitis in a subject, which comprises administering an effective amount of a 15-keto prostaglandin compound represented by the following formula (II):



wherein L and M are hydrogen, hydroxy, halogen, lower alkyl, lower alkoxy, hydroxy(lower)alkyl or oxo, wherein at least one of L and M is a group other than hydrogen, and the five-membered ring may have one or more double bond;

A is -CH₂OH, -COCH₂OH, -COOH or its functional derivative;

B is -CH₂-CH₂-, -CH=CH- or -C≡C-;

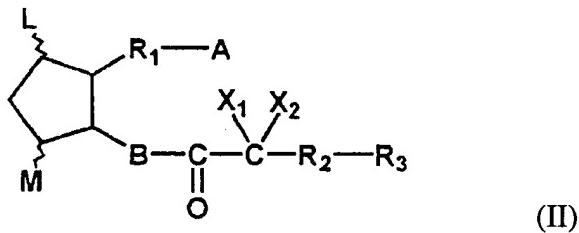
X₁ and X₂ are hydrogen, lower alkyl or halogen;

R₁ is a divalent saturated or unsaturated lower-medium aliphatic hydrocarbon residue, which is unsubstituted or substituted by halogen, alkyl, hydroxy, oxo, aryl or heterocyclic group;

R₂ is a single bond or lower alkylene; and

R₃ is lower alkyl, lower alkoxy, cyclo(lower)alkyl, cyclo(lower)alkyloxy, aryl, aryloxy, heterocyclic group or heterocyclic-oxy group to the subject.

42. (new): A method for the treatment of a subject having retinal cell disorder associated with apoptosis, which comprises administering an effective amount of a 15-keto prostaglandin compound represented by the formula (II):



wherein L and M are hydrogen, hydroxy, halogen, lower alkyl, lower alkoxy, hydroxy(lower)alkyl or oxo, wherein at least one of L and M is a group other than hydrogen, and the five-membered ring may have one or more double bond;

A is -CH₂OH, -COCH₂OH, -COOH or its functional derivative;

B is -CH₂-CH₂-, -CH=CH- or -C≡C-;

X₁ and X₂ are hydrogen, lower alkyl or halogen;

R₁ is a divalent saturated or unsaturated lower-medium aliphatic hydrocarbon residue, which is unsubstituted or substituted by halogen, alkyl, hydroxy, oxo, aryl or heterocyclic group;

R₂ is a single bond or lower alkylene; and

R₃ is lower alkyl, lower alkoxy, cyclo(lower)alkyl, cyclo(lower)alkyloxy, aryl, aryloxy, heterocyclic group or heterocyclic-oxy group to the subject.